

CLAIMS

1. An angular velocity sensor comprising:
a vibrator;
5 a case receiving said vibrator;
a terminal with one end thereof connected with said vibrator; and
a containing portion containing said case and having the other end of
said terminal embedded therein, wherein
said case is adapted to be supported within said containing portion by
10 said terminal.
2. The angular velocity sensor according to claim 1, wherein
said angular velocity sensor has a plurality of said terminals, and
said case is adapted to be supported within said containing portion by
15 said terminals from surroundings thereof.
3. The angular velocity sensor according to claim 1, further comprising
a mount portion mounting said case, located substantially in a center of said
containing portion, and disposed substantially parallel to a detecting axis of
20 angular velocity in said containing portion.
4. The angular velocity sensor according to claim 3, wherein
said mount portion embeds therein the one end of said terminal
connected with said vibrator.
- 25 5. The angular velocity sensor according to claim 3 further comprising:
a case electrode disposed on an outer bottom face of said case and

electrically connected with said vibrator; and

a front end portion of said terminal exposed on said mount portion,
wherein

said case electrode and said front end portion of said terminal are
5 electrically connected with each other.

6. The angular velocity sensor according to claim 1, wherein said
terminal has a bent portion.

10 7. The angular velocity sensor according to claim 1, wherein said
containing portion is made of a resin material.

8. The angular velocity sensor according to claim 1, further comprising
a metallic cover for covering said containing portion, the cover having an
15 engagement claw provided on its opening side, wherein

said containing portion has a recess provided in an outer bottom face
thereof and the cover is fixed in place with the engagement claw of the cover
squeezed into the recess in said containing portion.

20 9. The angular velocity sensor according to claim 8, wherein
the engagement claw of said cover bent into engagement with the recess
in the outer bottom face of said containing portion is used as a connection
portion with GND potential.

25 10. The angular velocity sensor according to claim 1, further
comprising an electrode provided by having a front end portion on one end side
of said terminal embedded in said containing portion exposed on a recess

provided in an outer bottom face of said containing portion.

11. The angular velocity sensor according to claim 7, wherein
said mount portion is made of an identical resin material to that of
5 which said containing portion is made.

12. The angular velocity sensor according to claim 10, wherein
said containing portion has protruded portions disposed on both sides of
said electrode, protruding above said electrode, and having bottom faces thereof
10 arranged perpendicular to a detecting axis of angular velocity.

13. The angular velocity sensor according to claim 1, wherein
said containing portion is made of a material having a laminar
structure.
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14. The angular velocity sensor according to claim 13, wherein
the material having a laminar structure is a liquid crystal polymer.

15. The angular velocity sensor according to claim 2, further
20 comprising a mount portion mounting said case, located substantially in a
center of said containing portion, and disposed substantially parallel to a
detecting axis of angular velocity in said containing portion, wherein

at least one terminal of said plurality of terminals is disposed parallel to
the detecting axis of angular velocity in said mount portion and at least one of
25 the other terminals is disposed in a direction perpendicular to the detecting axis
of angular velocity.

16. The angular velocity sensor according to claim 15, wherein
at least two terminals of said plurality of terminals are disposed on both
sides of said mount portion in a direction perpendicular to the detecting axis of
angular velocity.

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17. The angular velocity sensor according to claim 2, further
comprising a circuit for processing a signal output from said vibrator, wherein
said mount portion is provided with a hole and components constituting
said circuit are disposed therein.

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18. The angular velocity sensor according to claim 1, wherein
said vibrator is of a tuning-fork type.

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19. The angular velocity sensor according to claim 1, wherein
said vibrator includes a driving electrode and a detecting electrode.

20. The angular velocity sensor according to claim 1, wherein
a circuit for processing a signal output from said vibrator includes an IC.